Name: _____

Date: _____

Algebra 1B Pd: _____

Weekend Word Problem #14: Polynomial Geometry

The Situation: The Swift family is planning to build a rectangular pool with a length that is twice its width. They also want a tiled path that is 4 feet wide around the perimeter of the pool.
1. Choose a variable for the width of the pool.
2. Write an expression for the length of the pool using your variable from #1.
3. Sketch the pool and the path. Label all parts.
4. Using the sketch and your variables, write an expression for the total length of the pool and the path combined.
5. Using the sketch and your variables, write an expression for the total width of the pool and the path combined.

6. Write a simplified expression in standard form for the area of the pool and the path combined.

7. Write a simplified expression in standard form for the area of the path only.

8. The Swifts have enough tile to cover three hundred four square feet of the path and want to use all of the tile. What should the dimensions of the Swifts' pool be?

9. Discuss any problems and/or breakthroughs during your problem solving process. Write at least THREE QUALITY COMPLETE SENTENCES.

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